Department of Pesticide Regulation

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STATUS REPORT FOR FUMIGANT PESTICIDES

June, 2001

I. FUMIGANT DATA REQUIREMENTS

The development of the regulatory programs for 1,3-dichloropropene, methyl bromide, metam sodium, and other fumigant pesticides has documented the necessity of obtaining specific data characterizing the atmospheric partitioning, dispersion, and fate in order to effectively regulate fumigants. Staff are developing a data call-in for existing and anticipated new fumigants using existing authority for the registration and the reevaluation process. This should provide for the quickest means of registering and regulating new fumigant replacements for methyl bromide while protecting workers, the public, and the environment.

II. 2001 SCHEDULED AIR MONITORING

DPR has scheduled air monitoring for methyl bromide, 1,3-dichloropropene, MITC (metam sodium) and chloropicrin for the 2001 pesticide use season. The air monitoring is scheduled for July and August 2001 in Kern County and for September and October 2001 for Monterey and Santa Cruz counties. This monitoring should provide documentation of the impact of additional regulatory measures to mitigate the 2000 air monitoring levels.

III. METHYL BROMIDE

1. Risk Assessment/Data Evaluation

- Analysis of recent air monitoring data. The Department of Pesticide Regulation (DPR) has received air monitoring data for methyl bromide and 1,3-dichloropropene from the Air Resources Board. The monitoring data characterize air concentrations that occurred in an area of Kern County from July 10, 2000 through September 1, 2000, and an area of Monterey County from September 11, 2000 through November 3, 2000.

  The final report titled "Empirical Relationship between Use, Area, and Ambient Concentration of Methyl Bromide for Subchronic Exposure Concerns" has been finalized and is available for distribution (Attachment 1). This report documents the strong association between methyl bromide applications in 2000 in the monitoring areas and the resulting methyl bromide air concentrations detected during the monitoring period. A series of linear regression models were

developed which provide a means to evaluate mitigation options or to compare with any future monitoring results.

- The methyl bromide exposure assessment revisions incorporating the National Academy of Science peer review comments is anticipated to be completed in July 2001. The risk characterization document for methyl bromide will be amended to include the revised exposure assessment document.

2. Risk Management Status

- The Environmental Defense Center et al lawsuit and the Ventura County Agricultural Association et al lawsuit have been consolidated and will be heard in San Francisco. Previously, the Ventura County Agricultural Association et al had been filed in Sacramento, California.

- The Methyl Bromide Risk Management Plan for Seasonal Community Exposures (Attachment 2) was completed in response to air exposure levels which exceeded DPR's seasonal reference concentration during the high use season of 2000 (July through November). It includes several actions that collectively ensure adequate protection from seasonal exposures to methyl bromide. DPR has initiated a reevaluation of methyl bromide products pursuant to Articles 8 and 12 (Title 3) of the California Code of Regulations (California Notice 2001-5) in addition to other elements that expand monitoring, efficiently implement new soil fumigation regulations, and plan for an effective methyl bromide phase out.

IV. 1,3-DICHLOROPROPENE

1. Risk Assessment/Data Evaluation

- Utilizing local 1,3-dichloropropene use histories to developing future township use caps. DPR and Dow AgroSciences staff are jointly developing strategies to utilize local 1,3-dichloropropene use patterns to develop township-specific caps. Use of local data will allow some relief from the current statewide township use cap by removing some conservative default assumptions. For example, the current statewide cap assumes the worst case where the surrounding townships use are all at the cap limit. Obviously, townships adjacent to the ocean or mountains, or adjacent to townships with little or no use, are misrepresented by this worst-case scenario.

2. Risk Management Status

- Telone EC and Inline, products designed for drip applications, were registered June 21, 2001. These products should serve as methyl bromide alternatives for some commodities.

- Revised 1,3-dichloropropene recommended permit conditions were released June 22, 2001. These suggested conditions were reorganized and revised to provide more consistent and clear recommendations for conditioning permits. Buffer zones were standardized at a minimum of 100 feet. Greenhouse uses were eliminated and standard polyethylene tarps recommended for use when tarps are required. County agricultural commissioners will tailor county permits using these recommendations and their knowledge of local conditions.

V. CHLOROPICRIN

1. Risk Assessment/Data Evaluation

- Chloropicrin product registrants were notified on March 16, 2001, that the risk assessment process has started. This formally initiates work on the risk characterization document and is followed by a series of notices informing registrants of the progress of chloropicrin in the risk assessment process.

2. Risk Management Status

- Proposed chloropicrin permit conditions. DPR has reviewed the Southern Deputy Commissioners' proposal and included comments in an agricultural commissioner's letter that was sent in April. DPR will participate further as a reviewer as the proposal is further developed.

VI. MITC GENERATING COMPOUNDS

1. Risk Assessment/Data Evaluation

- DPR's toxic air contaminant risk assessment for MITC is on hold due to the lawsuit filed by the Metam Sodium Task Force.

2. Risk Management Status

- A regulation package placing metam potassium and other MITC generating chemicals on the restricted materials list is currently at the Secretary of State under a 30-day review. These materials are currently listed by emergency regulation.

- The Metam Sodium Task Force has filed a lawsuit to restrain DPR from listing metam sodium, MITC, or other metam sodium breakdown products as toxic air contaminants.

VII. POTENTIAL NEW FUMIGANTS

- DPR is currently (May 2001) waiting to receive applications for California for products containing methyl iodide and propargyl bromide. Staff have discussed registration requirements and study methodologies with consultants and have provided published studies and written protocols for guidance. A worker exposure protocol for methyl iodide is currently being reviewed by the Committee on Human Research at the University of California, San Francisco.

VIII METHYL BROMIDE ALTERNATIVES

- The request for proposals for the Pest Management Alliance Program and the Pest Management Research Program will be distributed July 2001. These programs consider proposals for methyl bromide alternatives. For further information, contact Adolf Braun at (916) 324-4247, or by email at <abraun@cdpr.ca.gov>.

- Summary of Methyl Bromide Alternatives Status Workshop at the Richard A. Henson Center, University of Maryland, Eastern Shore, Princess Anne, Maryland. This two-day workshop was organized by the USDA/EPA Methyl Bromide Alternatives Working Group. Secretary Glickman and Administrator Browning established this group in 1995. Concurrent sessions were presented on the status of methyl bromide alternatives for different commodities.

  Major Points:

  - Methyl bromide has an accelerated phase out due to increased cost of methyl bromide and regulations, restrictions, and notification requirements. However,

total fumigant use of 1,3-dichloropropene, chloropicrin, and especially metam sodium, have increased over time.

- There are currently no chemical alternatives to methyl bromide preplant fumigation. Some of the currently registered alternatives may be effective in one area, but not in other regions. Compounds such as 1,3-dichloropropene, metam sodium, and chloropicrin are partial alternatives, but are also restricted in their use. 1,3-dichloropropene has a township cap, and is not efficacious for heavy soil use at the current label rate. Metam sodium does not provide consistent results.
- Efficacious nonchemical alternatives to methyl bromide are not available at this time. For instance, soil solarization is not effective for strawberries grown on the California coast.
- The search for alternatives to methyl bromide should include the nursery part of the cropping system since there are currently no alternatives to methyl bromide in this area. This is specifically a problem for strawberries and bulb crops such a lilies. There should be a methyl bromide exemption for nursery production because of this deficiency.
- If methyl bromide is a problem, it should be phased out equitably across the world, rather than giving developing countries more time to phase out than the U.S. Competition from developing countries is a concern, in specific from China and Mexico, since these countries will be able to use methyl bromide until 2015.
- Growers need to know now what they can use as a replacement to methyl bromide. They are concerned about the change in farming and their future due to the phase out of methyl bromide.
- Researchers and chemical industry need more time to develop alternatives. Government should make more funds available for methyl bromide alternatives research. Regulators should expedite registration of potential methyl bromide replacements, such as the soil fumigant iodomethane. A rollback on methyl bromide to 50% was also proposed.